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Governing the design of national REDD +: An analysis of the power of agency☆,☆☆

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ABSTRACT

This paper investigates how three aspects of governance systems, namely the policy context, the influence of key agents and their discursive practices, are affecting national-level processes of policy design aimed at REDD +, reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. We conducted analysis in six REDD + countries (Brazil, Cameroon, Indonesia, Nepal, Papua New Guinea and Vietnam). The paper combines three methods: policy analysis, media-based discourse analysis and policy network analysis. The paper shows that policies both within and outside the forestry sector that support deforestation and forest degradation create path dependencies and entrenched interests that hamper policy change. In addition, most dominant policy coalitions do not challenge business-as-usual trajectories, reinforcing existing policy and political structures. No minority policy coalitions are directly tackling the root causes of deforestation and forest degradation, that is, the politico-economic conditions driving them. Instead they focus on environmental justice issues, such as calls for increased participation of indigenous people in decision-making. Only in two of the six countries are these transformational change coalitions vocal enough to be heard, yet to exercise their agency effectively and to support more substantial reforms, these coalitions would need the participation of more influential policy actors, particularly state agencies that have the authority to make binding decisions about policy. Furthermore, discourses supporting transformational change would need to be reflected in institutional practices and policy decisions.

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1. Introduction

Reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD +), requires substantial policy change and governance reform (Angelsen et al., 2009a; Corbera and Schroeder, 2011; Kanninen et al., 2008; Luttrell et al., 2011). The concept of reducing emissions from deforestation was first proposed at the 11th Conference of the Parties to the UN Framework Convention on Climate Change (UNFCCC COP 11; Montreal, 2005) by a group of countries led by Papua New Guinea and Costa Rica. The main idea of REDD + is to provide positive financial incentives to countries to reduce emissions through avoided deforestation and forest degradation, and to compensate these countries based on their performance, even though the concept itself has changed over time (Angelsen and McNeill, 2012). To qualify for financial compensation under the UNFCCC, countries have to formulate (and implement) national REDD + strategies.

REDD + governance encompasses a range of institutions, organisations, principles, norms, mechanisms and decision-making procedures. Governance-related questions in the literature concern the appropriateness of financial mechanisms, the allocation of and access to REDD + benefits, the effectiveness of monitoring systems, and 'good governance' principles such as transparency, accountability and legitimacy (Brockhaus and Angelsen, 2012; Biermann et al., 2009; Corbera and Schroeder, 2011; Kanowski et al., 2011; Karsenty, 2008; Karsenty and Ongolo, 2012; Vatn and Vedeld, 2012). The governance of national-level REDD +, as in other fields of environmental governance, involves a range of more or less powerful state and non-state actors that operate in country-specific political structures and employ multiple mechanisms to realise their interests and ideas (Bulkeley and Newell, 2010; Cashore, 2002; Corbera and Schroeder, 2011; Lemos and Agrawal, 2006). Following Lemos and Agrawal (2006: 298), we understand environmental governance as a system, in which political actors try to influence policy actions and outcomes through the system's regulatory processes, mechanisms and organisations.

In this paper, we explore how three key elements of governance, namely the interaction of policy actors, the structures (policy path

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dependencies and power constellations) in which they operate and the mechanisms they employ (discourses and discursive practices used in coalition building), in different countries likely enable or constrain effective REDD+ policy-making aimed at moving away from business-as-usual trajectories towards transformational change (Brockhaus and Angelsen, 2012; Di Gregorio et al., 2012a). We focus on the national-level policy domain, because this is the scale at which REDD+ strategies are emerging.

Our aim in investigating the relationship between these three key aspects of REDD+ governance is to assess the power of agency in REDD+ policy-making in six national contexts. The paper addresses two key questions: 1) to what extent do policy discourses on REDD+ challenge existing business-as-usual scenarios of deforestation and call for transformational change? and 2) what is the likely influence of the coalitions formed around these discourses? Using these questions, we assess the extent to which dominant and minority policy coalitions exercise agency and the implications for realising REDD+.

We explore these questions by presenting a comparative analysis of six countries (Brazil, Cameroon, Indonesia, Nepal, Papua New Guinea (PNG) and Vietnam). These countries are at different stages in the forest transition and represent all three major tropical regions (Angelsen and Rudel, 2013). The paper combines a policy analysis investigating the path dependencies of the policy context as well as a media-based discourse analysis and a policy network analysis, which are used to identify features of dominant and minority discourse coalitions.

We begin by presenting a brief theoretical framework of how actors, structures (policy and political path dependencies) and mechanisms (discursive practices) are related and how they interact in the context of national REDD+ processes. This is followed by a description of the research design and methods. The Results and discussion section first investigates the extent to which existing national policies enable or hinder REDD+ and create path dependencies. It then analyses the influence of the actors behind the dominant policy discourses that either reinforce existing structures or challenge them. In the conclusion, we discuss possible implications for policy change.

2. Theoretical framework: Structures, agents and mechanisms

What can influence the ability of national REDD+ strategies and policy processes to move from business-as-usual trajectories towards transformational change? Here, transformational change is defined as 'a shift in discourse, attitudes, power relations, and deliberate policy and protest action that leads policy formulation and implementation away from business as usual policy approaches that directly or indirectly support deforestation and forest degradation' (Biermann et al., 2012; Brockhaus and Angelsen, 2012: 16–17)? We include under business-as usual, discursive practices that avoid tackling these causes in national policy and indications of lack of call for policy action in this regard — or 'political inaction' (Bell, 1994: 59). We focus on three elements of governance: 1) the *structural conditions* in REDD+ policy arenas formed by institutional and policy path dependencies; 2) the *agents* operating in and constituting these arenas, their interests and their power in pursuing them; and 3) the *mechanisms* these agents employ to influence the outcomes of REDD+ policy processes, such as their discursive practices (Angelsen et al., 2012; Di Gregorio et al., 2012a; Lemos and Agrawal, 2006). In the rest of this section, we discuss these elements in the context of REDD+.

Institutions, including policies, regulations, rules and norms, are established over time and, in many countries, have led to institutional path dependencies in policy formulation that represent political and policy *structures* that encourage deforestation and forest degradation. These structures, which favour extractive forest and land use policies, are supported and constituted by powerful *actors*, either individually or organised in coalitions, and are of benefit to numerous actors in the polity (Luttrell et al., 2012; Mehlum et al., 2006; Ross, 1999). Furthermore, these structures can be reinforced by rent-seeking behaviour, which is common amongst state and non-state actors in the forestry sector (Karsenty and Ongolo, 2012; Ross, 2001).

'Power' in this context refers to the ability of actors to influence forestry and land use decisions such that the outcomes of these decision processes serve their interests (Biermann, 2010). Power here is understood as inherently relational and it goes beyond the Weberian ideal of the state as main actor (Foucault, 1980) to encompass a variety of actors. The power of political actors in forest governance has many different facets, and has been analysed and theorised in multiple ways (for a more exhaustive review of power in forest governance, see Krott et al., 2013, this issue). In this paper, the focus is on a reputational measure of power, based on the assessment of influence of each actor by all other policy domain actors (Kriesi et al., 2006: 347). This measure can reveal the actual power relations amongst actors and their potential ability to influence policy outcomes.

Since the Montreal Conference of Parties in 2005 and increasingly after the REDD+ took centre stage in global climate change debates in Bali in 2007, forest-rich countries have seen the entry of new policy actors cooperating or competing to realise diverse interests around REDD+. These actors include businesses targeting carbon and 'green' investments, state agencies working on ecosystem services provision and licensing, and groups representing indigenous and forest-dependent communities. These actors seek to influence REDD+ policy processes at all levels of governance, from the global to the local level, and at different stages of the policy processes, from the formulation to the implementation of national REDD+ strategies (Schroeder, 2010). As a result, a new *agency* for the value of 'standing forest' is emerging, incorporating both old and new actors and interests (Brockhaus and Angelsen, 2012; Corbera and Schroeder, 2011; Schroeder, 2010). Following Biermann (2010), we understand agents as actors that have the capacity and the legitimacy to exercise power, where legitimacy is achieved by obtaining, formally or informally, the consent of the governed.

These actors use argumentation to advance their interests and ideas. These discursive practices are a key *mechanism* for gaining consent and framing policy discourses in a way that reflects the interests and beliefs of specific policy actors (Jasanoff, 2009), and are key features of the governance mechanisms by which policy processes are negotiated (Benford and Snow, 2000; Bulkeley, 2000; Hajer, 1995). Discourse is critical in public policy-making because it shapes how a policy problem is perceived and, consequently, what kinds of solutions are conceivable or could be considered the 'right' choice (Hajer and Versteeg, 2005). Multiple discourses about a single policy problem can co-exist and provide competing claims about what the policy problem is about, who is to blame and how the problem can be solved (Hajer, 1993). Actors then build coalitions around specific understandings of REDD+, which is a strategic mechanism to express agency in the REDD+ policy domain. Coalition building allows not only powerful but also marginalised actors to pool their resources and voices, engage together in policy arenas and try to influence decisions, as has been observed in international REDD+ negotiations (Schroeder, 2010).

A discourse coalition achieves dominance in a policy arena if it fulfils three conditions: 1) central actors are persuaded and adopt the new discourse; this condition, which Hajer (1993) calls 'discourse structuration', states that the more influential the members of a discourse coalition are, the more likely the coalition will be dominant; 2) the discourse coalition includes key state actors, because they have binding authority to make policy decisions (Sabatier and Jenkins-Smith, 1993; Laumann and Knoke, 1987); and 3) institutional practices incorporate this discourse, that is, policy processes reflect the ideas of this discourse; Hajer (1993) calls this condition 'discursive institutionalisation'.

Multiple agents with distinct interests, ideas and information are in a constant struggle to influence the reconstitution of institutions and the institutionalisation of discursive practices and ideas (Jessop, 2001). Hence, the classical divide between actors' agency and social and political structures dissolves with the use of discursive practices as an interactive

mechanism that relates actors and structures to each other (Arts, 2012; Giddens, 1984). The relationship between structure and agency then becomes a matter of empirical investigation (Fuller, 1998; Hay and Wincott, 1998).

In this paper, the investigation takes the form of a comparative analysis of this relationship in the national REDD+ governance systems of Brazil, Cameroon, Indonesia, Nepal, PNG and Vietnam. We argue that country-specific political structures (including institutional and policy path dependencies and power hierarchies) and agency (expressed through discourse coalitions), amongst other factors, co-determine the emergence and nature of national REDD+ strategies and outcomes. The outcomes reflect the extent to which policy decisions leave the status quo unchallenged, or support and reinforce the structures that enable deforestation and forest degradation and thereby constrain effective REDD+ policy-making, or challenge and transform existing structures in favour of forest conservation and restoration.

3. Research design and methods

The analysis uses a multi-method comparative research design aimed at investigating the structural conditions (policy and political path dependencies), the actors' (reputational) power and the discursive practices they employ, all of which shape the REDD+ policy domain. Three research design components were undertaken in each country (Brockhaus and Di Gregorio, 2012).

The first component, undertaken at the start of the study, was a country-level policy analysis that investigated the contextual conditions and structural features of national governance systems.[1] Drawing on literature reviews and semi-structured interviews with REDD+ policy actors, it included a politico-economic analysis of governance aspects and the drivers of deforestation and forest degradation (Babon and Gowae, 2013; Dkamela, 2010; Hosonuma et al., 2012; Indrarto et al., 2012; May et al., 2011b; Paudel et al., 2013; Pham et al., 2012a).

The second component was a content analysis of print media articles on REDD+ published in the three leading newspapers in each country (those with the highest circulation and representing diverse political positions) between 2005 and 2010, which were used to identify discourse coalitions.[2] The focus of the present analysis is on policy actors' reported position statements (or stances) on REDD+, which were coded to identify discursive frames – of 'schemata of interpretation … [that enable individuals] to locate, perceive, identify, and label' a situation (Goffman, 1974: 21) – following a predefined codebook (Babon et al., 2012; Cronin and Santoso, 2010; Kengoum, 2011; Khatri et al., 2012; May et al., 2011a; Pham, 2011). In a subsequent round of open coding, these stances were grouped into broader discourse categories (or master frames, which are broader frames in terms of 'interpretative scope, inclusivity, flexibility and cultural resonances' (Benford and Snow, 2000: 619) that subsume a number of distinct organization-specific frames). This procedure was followed to categorize policy actors into distinct discourse coalitions (Benford and Snow, 2000; Bulkeley, 2000; Cronin et al., 2012; Pham et al., 2012b). We distinguished two categories of master frames in each country: one reflecting resistance to change (business as usual or BAU), and the other challenging current practices of deforestation and forest degradation (transformational change or TC). This is a simplification of what BAU and TC frames actually represent: two extremes on a continuum of frames that are shaped by incentives, discursive practices and power relations (Brockhaus and Angelsen, 2012). For each country and for each category (BAU and TC), we then analysed the discourse coalition whose views were most represented in the media (highest incidence of stances).

The third component was a policy network analysis undertaken in each country between 2010 and 2012 (Bushley, 2012; Gebara et al., 2012; Kengoum, 2012; McIntire et al., 2012; Moeliono et al., 2012, 2013; Pham, 2012). In this paper, we use interviewees' replies to the question: 'Please indicate those organisations that stand out as especially influential on domestic REDD policies.' Respondents answered this question by selecting from a complete list of the policy domain's organizational actors[3] each organisation that they considered 'especially influential'.[4] From these data, we built a reputational network of influence that we used to assess the level of influence of discourse coalitions (Brandes et al., 1999; Knoke, 1998; Kriesi et al., 2006).

Nodes in the network represent actors and the directed ties indicate the perception that an actor is influential. We used indegree, a classical social network analysis measure of centrality, to assess influence (Wasserman and Faust, 1994).[5] The higher the number of incoming ties, the higher the indegree. We then classified organisations into nine categories – state actors; national research institutes; domestic NGOs and civil society organisations (CSOs); domestic business; international NGOs; intergovernmental organisations and international research organisations; foreign or multinational businesses; foreign government agencies; and others (mainly individuals without an institutional affiliation) – and calculated the indegrees per actor category.

Drawing on Kriesi et al. (2006), we calculated reputational power indices for each actor category by dividing the total number of indegrees per category by the number of all possible ties the actor category could have received:

$$R_p = \frac{\sum_{i=1}^{n_p} id_i}{n_p(n-1)}$$

where R_p denotes the reputational power index R of actor category p, and $p = 1, 2, \ldots, 9$; id_i denotes the indegree of actors i, with i belonging to actor category p; and n_p represents the number of actors in actor category p where n denotes the number of actors interviewed.[6]

In a second step, we applied the reputational power index to the composition of each discourse coalition identified in the media analysis. The reputational power of a discourse coalition is equal to:

$$R_d = \sum_{p=1}^{j} R_p * m_{pd}$$

where R_d denotes the reputational power index R of discourse coalition d and m_{pd} equals the number of stances of actors that belong to category denotes the reputational power index R of discourse coalition d and m_{pd} equals the number of stances of actors that belong to category p that are

[1] For comparability, all country teams followed a common detailed method guide indicating the areas to be investigated including politico-economic aspects and past and present policies (Brockhaus et al., 2012a).

[2] For comparability, all country teams used the same predefined code book, which was translated into the national language. There were three levels of coding: the first uniquely identified the media articles; the second identified the main frames in the articles (main topic and type of frame); and the third identified further characteristics of the frames in more detail, including the identification of the position statements (stances) on REDD+ of up to four policy actors mentioned in the articles. These stances are the main media data source for this paper (Di Gregorio et al., 2012b).

[3] In all countries except Vietnam, it was possible to interview only a subset of organisations from the complete list, with response rates between 55% (Indonesia, which also had the largest list of 115 actors) and 87% (Brazil, with 56 out of 64 actors).

[4] A key step in policy network analysis concerns the boundary definition of the policy domain. We define the REDD+ policy domain as the 'substantive focus of concern of policy initiatives and debate' around REDD+ in a specific country (Laumann and Knoke, 1987: 9–10). Domain members are organisations that define themselves and that are perceived by others as a part of the national policy domain (Laumann and Knoke, 1987: 251). Information from the media analysis, literature sources and researchers' expertise was used to compile a preliminary list of actors, which was then refined and validated by a panel of experts representing different policy actor categories.

[5] The sum of an actor's column in the adjacency matrix (incoming ties) divided by all possible ties in the network gives an actor's indegree: $id_j = \sum_{i=1}^{n} \frac{x_{ij}}{n-1}$ with $i \neq j$.

[6] Dividing the indegrees of the actors in a specific actor category by the total number of possible indegrees based on the number of interviewed actors makes it possible to make comparisons across actor categories (Wasserman and Faust, 1994) and take into account the varying response rates between countries.

part of discourse coalition d. Within each country, the discourse coalition with the highest R_d value fulfils the first condition of a dominant coalition: the coalition is the most vocal and its actors are more influential than those of the other discourse coalitions identified.

Finally, to compare the relative power of discourse coalitions within each country, we normalise the sum of the reputational power index of the main BAU and TC discourse coalitions to 1:

$$R_{\text{BAU norm}} + R_{\text{TC norm}} = 1$$

where $R_{\text{BAU norm}} = \frac{R_{\text{BAU}}}{R_{\text{BAU}}+R_{\text{TC}}}$ and $R_{\text{TC norm}} = \frac{R_{\text{TC}}}{R_{\text{BAU}}+R_{\text{TC}}}$.

Thus, for example, if the score of $R_{\text{BAU norm}}$ is bigger than 0.5, then the BAU coalition is likely more influential than the TC coalition. In other words, the BAU coalition fulfils the first condition (discursive structuration) of a dominant coalition.

All data collection was undertaken between 2010 and 2012, when all countries in this study were in what is called Readiness Phase (Angelsen and McNeill, 2012; Wertz-Kanounnikoff and Angelsen, 2009; Angelsen et al., 2009b). Some limitations of the methods need to be highlighted. First, different response rates to the policy network survey affect the level of the power index across countries (Wasserman and Faust, 1994). However, in the paper, we only compare power indices between coalitions within countries. In other words, we cannot say that, for example, the BAU discourse coalition in Indonesia is more powerful than that in Vietnam, but we can say that the relative strength of the BAU coalition compared with the TC coalition is slightly greater in Indonesia than that in Vietnam. Also, the power indicators refer to the conditions at the time of the survey, which are likely to change over time. Second, using media data to determine discourse coalitions has limitations, as not all policy actors use the media to state their claims. In particular, private businesses were not well represented in most countries. Furthermore, in Nepal, state actors were less vocal in the media, which can be interpreted as a strength of CSOs, but could also create a bias in favour of other actors that use print media much more actively. We therefore interpret the results as indicative only.

4. Results and discussion

4.1. Policies hindering and enabling change

There is wide consensus that national REDD+ policy formulation has been developing at a much slower pace than initially expected (Angelsen and McNeill, 2012). To investigate the structural constraints and opportunities arising from the policy and political context, we analysed cross-sectoral policy impacts, implementation deficits and forestry and REDD+ policy developments (Table 1). To do this, we started with the main drivers of deforestation and forest degradation. Agriculture (large or small scale) and legal and illegal commercial logging are the leading drivers of deforestation and forest degradation in all countries studied except Brazil, where cattle-ranching is the main driver of deforestation (Table 1). Mining, infrastructure development and population movements and policies (migration and resettlements) also have direct impacts on deforestation and forest degradation (Table 1) (Babon and Gowae, 2013; Dkamela, 2010; Hosonuma et al., 2012; Indrarto et al., 2012; May et al., 2011b; Paudel et al., 2013; Pham et al., 2012a). There are also indirect impacts linked to tax and trade regimes, monetary policy and foreign debt (Kaimowitz and Angelsen, 1998). Consequently, to assess structural policy constraints, we need to take into account cross-sectoral linkages and policy impacts (Dubé and Schmithűsen, 2003, 2007). For example, forest conversion is facilitated by tax regimes and economic development strategies, such as tax exemptions for food and energy estate development and the pulp and paper industry in Indonesia and, in the past, for cattle-ranching in some parts of Brazil (Brockhaus et al., 2012b; Indrarto et al., 2012; May et al., 2011b). In addition, political aims of self-sufficiency in food and cash crop development produce incentives that contribute to forest conversion (Pacheco et al., 2012), as has occurred in Vietnam. An indirect effect of the currency devaluation in Cameroon was a boom in timber exports (Dkamela, 2010). Furthermore, in Brazil, Vietnam, Nepal and Cameroon, infrastructure development, such as plans for new roads and hydropower plants, is contributing to deforestation. In PNG, although plantations are responsible for only low levels of deforestation, the aim of the National Agriculture Development Plan is to substantially increase oil palm cultivation in the future; accompanying this plan is the current boom in 'virtual' oil palm: Special Agricultural and Business Leases are being exploited as a means of gaining permission for logging with little evidence of commitment to later undertake the promised agricultural development (Babon and Gowae, 2013) (Table 1).

Cross-sectoral coordination is notoriously challenging and requires inclusive policy networks – regular and reciprocated interactions across stakeholder from different sectors –, procedural changes in decision-making (e.g. participatory processes) and improved information exchanges across sectors (Dubé and Schmithűsen, 2003; Rethemeyer, 2007). Yet the main constraint on cross-sectoral coordination is political in nature. Over time, the institutionalisation of past policies leads to the formation of powerful interest groups (political structures) in specific sectors that resist change. Policy actors then tend to become 'inwardly focused' and see policy coordination as 'threatening to the current *status quo*' (Shannon, 2003: 145).

Absence of policies or failure to implement them effectively can also hamper transformational change, as in Nepal, where the lack of an effective land use policy is impeding REDD+ policy formulation and implementation (Paudel et al., 2013). In other cases, policies that would otherwise support REDD+ are not enforced, as in the case of sustainable forest management regulations in PNG and ineffective efforts to combat illegal logging in Cameroon, Indonesia and Vietnam (Babon and Gowae, 2013; Dkamela, 2010; Indrarto et al., 2012; Pham et al., 2012a). Even in Brazil, weak enforcement is reducing the effectiveness of an otherwise very advanced forest tenure framework that recognises particular indigenous rights to land and forest resources. On paper, PNG forest resources are controlled by customary institutions and informed consent is a requirement for any agreement with external actors; in reality, however, the process is often abused and inadequate knowledge and political resources undermine the effectiveness of these institutional arrangements. Implementation deficits often arise because of the lack of political support. Failure to enforce and implement policies also has substantial equity implications (Di Gregorio et al., 2013; Luttrell et al., in press).

On the positive side, some policies preceding or not strictly related to REDD+ create enabling conditions for REDD+ policies. These include forest conservation, certification of forest products and land use planning policies that incorporate environmental sustainability objectives. In particular, experience with policies on payments for environmental services in Brazil and Vietnam has laid a solid foundation for REDD+ policy formulation (Bartels et al., 2010; Pham et al., 2012a) — perhaps to be expected, given that successful policy-making is most often the result of long-term experimentation and learning (Ostrom, 1999). Enabling policies that have proven successful go on to create their own path dependencies and weaken BAU coalitions, thus facilitating the transition towards more effective – and often equitable – REDD+ policy developments. This process has emerged most clearly in Brazil and particularly Nepal, where a long history of community forestry has led to very well-organised and outspoken civil society (Acharya, 2002).

Finally, all the countries have, or are in the process of establishing, new institutions, bodies and policies aimed at developing and implementing REDD+ (Table 1). However, failure to address cross-sectoral policy impacts, the political power structures reinforcing path dependencies leading to deforestation and forest degradation and the related shortcomings in implementation will undermine efforts to achieve transformational change. Although path dependencies linked to

Table 1
Drivers of deforestation and policies hindering and enabling change.

Country	Drivers of deforestation and forest degradation	Policies and operational tools that clash with REDD+ aims	Policies that could support REDD+	Bodies and policy milestones associated with REDD+
Indonesia	Agriculture (large scale including forest plantations such as oil palm, small scale, subsistence); logging; mining	Tax dependence on forest and mining; tax breaks for forest products, farming produce, pulp and paper; mining permits in protected areas; fiscal and non-fiscal concessions for food estate and energy estate development; biofuel development; land allocation for oil palm plantations	(1990) Law on Conservation of Natural Resources and Ecosystems; (1994) Law on Ratification of UNFCCC; (2009) Law on Environmental Protection and Management; (2011) Master Plan for Acceleration and Expansion of Economic Development for 2011–2025; (2012) Ministry of Forestry Regulation on Guidelines on Natural Environmental Services Business	(2007) Indonesian Forest Climate Alliance; (2008) establishment of National Climate Change Council; (2009) Indonesian Climate Change Trust Fund; Ministry of Forestry Regulation 68/2008 on REDD; (2009) Ministry of Forestry Decree 36 Carbon Sequestration Licences; UN-REDD; (2010) Letter of Intent with Norway; REDD+ Task Force; (2011) Presidential Regulations No. 61 and 71 on GHG Emission Inventory and National Action Plan for Reducing GHG Emissions; (2010) establishment of REDD+ Task Force; REDD+ pilot province (Central Kalimantan); national strategy and public consultation; (2011) moratorium on new licences in natural primary forest and peatland governance; R-PP approved/grant signed
Vietnam	Agriculture; infrastructure; logging; fire; shifting cultivation; migration	Infrastructure (roads and hydropower); self-sufficiency in food and cash crop development (rubber and coffee); National Socio-Economic Development Plan; credit schemes to alleviate poverty; land allocation; economic development as main goal of Forest Development Strategy	Decision 380 and Decree 99; payment for forest environmental services including benefit-sharing regulation (strong design, weak implementation); Law on Forest Protection and Development 2004 and Land Law 2003: legal foundation for carbon rights	(2009) National REDD network and technical working groups, UN-REDD; (2010) National Climate Change Strategy and National REDD programme; (2011) National MRV framework endorsed, R-PP resubmitted
Brazil	Ranching; agriculture (large and small scale); infrastructure; selective logging; mining; fire	Rural credit for cattle-ranching (although more limited than in the past) and infrastructure development (roads and dams); poor enforcement of tenure rules	Forest Code conservation requirement on private land; improved enforcement of land use policies (including protected areas); economic and ecological zoning; efforts to certify producer legality commercial chains (beef, soy); land regularisation process and demarcation of indigenous land; real-time monitoring of deforestation	(2008) Brazil Amazon Fund and National Plan on Climate Change; (2010) NAMA includes REDD; (2011) Mato Grosso state bill on REDD; (2011) National REDD+ Strategy formulation
Cameroon	Agriculture (medium and small scale, subsistence); logging; mining	Currency devaluation boosting logging exports; infrastructure (roads, rail and dams); mining and large-scale agriculture projects	Law No. 2011/08 on Guidelines for Territorial Planning and Sustainable Development in Cameroon	(2009): REDD Cameroon pilot steering committee; (2009) National Observatory on Climate Change; (2011) UN-REDD Programme; (2012) R-PP submitted
Nepal	Agriculture; illegal logging; resettlement; infrastructure; fire	Agricultural modernisation and associated infrastructure development; hydropower development; local road construction; mining of sand, boulders and stone; lack of overarching land use policy	Subsidies for kerosene, biogas, micro-hydro, solar and improved cooking stoves; community forestry programme	(2009) Establishment of REDD cell and working group; R-PP finalised; UN-REDD Programme; (2010) proposed amendment to Forestry Act; (2011) R-PP grant signed
PNG	Commercial logging; subsistence agriculture; clearing for plantations; mining; forest fires	Low and unequal levels of development and reliance on forestry sector to provide basic services (roads, health, education) in rural areas; Forest Clearance Authorities granted as part of Special Agriculture and Business Leases; National Agriculture Development Plan (2007–2016) promoting expansion of palm oil industry;	Customary land ownership; informed consent for Forest Management Agreements (but not enforced); Forestry and Climate Change Framework for Action 2009–2015; 2010 Climate-Compatible Development Strategy (carbon neutrality by 2050); Papua New Guinea Development Strategic Plan 2010–2030 includes sustainable forest management	(2008) R-PIN submission; (2009) UN-REDD Programme; REDD+ MRV; (2010) National Climate Change Committee and Technical Working Groups

Abbreviations: GHG: greenhouse gases; MRV: Measuring, Reporting and Verification; NAMA: Nationally Appropriate Mitigation Actions; R-PIN: Readiness Plan Idea Note; R-PP: Readiness Preparation Proposal; UNFCCC: United Nations Framework Convention on Climate Change.

institutionalised policies opposing REDD+ create structural conditions that impede change, policy coalitions are actively engaged in both breaking up and reinforcing these very path dependencies, as discussed in the next section.

4.2. Discourse coalitions in the media: Resisting or arguing for change

Various discourse coalitions are active in policy domains. Some reflect existing structures, whereas others seek transformation and new directions for policy. Coalitions are composed of a variety of actors and coalesce around a common discourse (Hajer, 1995). In each country, we identified between five and 11 master frames that bring together these coalitions. Fewer master frames were identified in countries with relatively little REDD+ media coverage – Nepal (6), Cameroon (5) and Vietnam (8) – and more in countries with greater coverage — Indonesia (11), Brazil (11) and PNG (10). In Table 2, we list the most vocal BAU and TC discourse coalitions, with a breakdown of the types of policy actors represented in each. BAU master frames represent themes that, although broadly supportive of REDD+ (in the countries studied, most policy coalitions are ostensibly supportive of REDD+), do not engage with the reforms that are necessary to effect a shift towards transformational change.

The evidence from the six countries indicates that BAU coalitions mainly discuss international issues linked to REDD+. In Indonesia and PNG, the most vocal BAU coalition ('global financial support' in Table 2) comprises demands by national actors for developed countries to contribute financially to support REDD+ activities. In both countries, this coalition is dominated by state actors. In Brazil and Cameroon, the main BAU coalition emphasises that REDD+ activities should be part of a global response to climate change ('global solution' in Table 2). In both cases, international and state actors are the most vocal supporters. In Vietnam, the main BAU coalition stresses the win–win aspects of REDD+ policies and the benefits of combining REDD+ with payments for environmental

Table 2
Reputational power of discourse coalitions.

Country	Master frame	Actor categories in the main BAU and TC discourse coalitions (no. of actors' stances expressed in the coalition)	No. of stances of coalition actors	Reputational power index of discourse coalition R_d	Normalised reputational power index of discourse coalition $R_{BAU\ norm}$ $R_{TC\ norm}$
Indonesia	Global financial support (BAU)	State (31); Domestic NGOs and CSOs (8); International NGOs (7); Foreign government agencies (6); Intergovernmental organisations/ international research institutes (5); National research institutes (1); Others (8)	66	8.74	0.68
	Risk of losing rights (TC)	Domestic NGOs and CSOs (14); International NGOs (10); State (3); Intergovernmental organisations/international research institutes (3); National research institutes (1); Others (1)	32	4.18	0.32
Vietnam	Win–win (BAU)	State (5); Intergovernmental organisations/international research institutes (3); Foreign government agencies (1)	9	2.57	0.65
	User pays (TC)	State (5)	5	1.37	0.35
Brazil	Global solution (BAU)	International NGOs (8); State (7); Foreign government agencies (6); Intergovernmental organisations/international research institutes (4); Foreign/multinational business (2); Domestic NGOs and CSOs (3); National research institutes (2); Domestic business (1)	33	9.48	0.64
	Participation of indigenous people (TC)	Domestic NGOs and CSOs (13); International NGOs (2); State (1)	16	5.37	0.36
Cameroon	Global solution (BAU)	Intergovernmental organisations/international research institutes (3); State (2); Others (1)	6	2.56	1
	None		0	0	0
Nepal	Global solution (BAU)	Domestic NGOs and CSOs (2); National research institutes (1); Intergovernmental organisations/international research institutes (1); Others (2)	6	1.33	0.27
	Rewarding communities (TC)	Domestic NGOs and CSOs (5); Foreign government agencies (2); State (1); National research institutes (1); Others (1)	10	3.53	0.73
PNG	Global financial support (BAU)	State (14); Foreign government agencies (3); Intergovernmental organisations/international research institutes (3); Domestic NGOs and CSOs (2); Domestic business (1); Foreign/multinational business (1) International NGOs (1); National research institutes (1)	26	11.00	0.51
	Empowerment (TC)	Domestic NGOs and CSOs (9); National research institutes (7); State (6); International NGOs (6); Domestic business (1); Others (1)	30	10.50	0.49

BAU: Business-as-usual; TC: Transformational change.

services ('win–win' in Table 2), on the grounds that having both forest protection and development would boost incomes; state actors dominate most stances in Vietnam, which is not surprising given the state's strong control over the media. Only in Nepal is the main BAU coalition not dominated by state actors; rather, the media coverage is led by the input of professional forestry experts who advise journalists, and state actors have little media presence (Khatri et al., 2012).

TC coalitions focus instead on domestic issues. In Vietnam, this coalition calls for domestic users of forest environmental services to compensate providers and pay for the benefits they receive ('user pays' in Table 2). It is the only TC coalition that is represented (exclusively) by state actors. In all other countries, the focus of the most vocal coalition for change is on the need to introduce REDD+ safeguards to ensure the protection of local and indigenous rights, increased participation and empowerment. These coalitions predominantly comprise domestic NGOs and CSOs, followed by international NGOs; state actors are represented in limited numbers. In Indonesia, the TC master frame warns that REDD+ might involve a trade-off between effectiveness (delivery of greenhouse gas emission reductions) and equity in terms of restrictions on access to forest, possibly leading to dispossession and threatening local livelihoods ('risk of losing rights' in Table 2). In Brazil, the main coalition for change demands increased participation by indigenous people in decision-making on REDD+ ('participation of indigenous people' in Table 2). In PNG, the focus is on empowering local communities to ensure that they can benefit from REDD+ ('empowerment' in Table 2). This includes providing transparent and complete information on REDD+ in a suitable format for communities and making arrangements that facilitate effective participation in decision-making, including effective free, prior and informed consent processes. Similarly, in Nepal, the coalition for change calls for benefit-sharing schemes that reward local and indigenous communities, particularly their poorer members ('reward communities' in Table 2). All these TC coalitions have concerns about environmental justice related to REDD+.

In Cameroon, however, we have not been able to identify a coalition for change. None of the master frames in Cameroon is transformational ('none' in Table 2), neither in the sense of clearly addressing national drivers of deforestation and forest degradation nor in ensuring co-benefits of REDD+. Rather, the only stance in Cameroon that starts to address national-level REDD+ issues recognises that REDD+ will require major technical and financial assistance. This is hardly a frame calling for transformational change, given that it merely demands support from external actors.

Notably, the main TC coalitions in the different countries focus on REDD+ safeguards and environmental justice issues such as protection of local rights, empowerment and increased participation. Particularly striking in all countries is the absence of master frames directly addressing national drivers of deforestation and forest degradation such as agricultural expansion and logging activities. Very few actors clearly state that reducing carbon emission from forests requires substantial national policy reforms both within and outside the forestry sector.

4.3. Discourse and power

As mentioned above, a dominant discourse coalition has three characteristics: central actors adopt their discourse; the coalition includes key state actors; and institutional practices reflect this discourse. The coalition with the higher reputational power index within a country fulfils the first of these conditions.

The two rightmost columns of Table 2 present the reputational power index of the discourse coalitions and their normalised equivalent. In Vietnam, Indonesia and Brazil, the BAU coalition represents more influential actors than the TC coalition. In Vietnam and Indonesia, state actors clearly dominate these coalitions (fulfilling also the second condition for a dominant coalition) and BAU coalitions are twice as powerful as TC coalitions. In PNG, the BAU coalition is only slightly more influential than the TC coalition. By contrast, in Nepal, the most

powerful actors represent the TC coalition, which has a power index three times higher than the BAU coalition.

Indonesia has the next greatest relative difference between normalised power indices. With an index of 0.68, the BAU coalition has a strong dominance over the coalition advocating for recognition of local rights. Although some state actors are included in the coalition for change, this finding supports evidence in the literature indicating strong ongoing resistance in Indonesia to the inclusion of substantial tenure issues in policy debates (Indrarto et al., 2012). In the nearly 15 years since the fall of the Suharto regime – a period during which forest tenure issues were taboo in policy discussions – the rights coalition has made progress, yet it needs to recruit more influential actors, particularly from within the state, if benefits related to access and control of forest resources are to become fixed on the REDD + political agenda.

The relative difference in power between the BAU and TC coalitions in Brazil differs only slightly from that in Indonesia. This is somewhat surprising given that recognition of indigenous rights is far more advanced in Brazil than in Indonesia. This result might be partly biased by the lower response rate to the network survey in Indonesia compared with Brazil. However, it is also the case that, although legal recognition is advanced in Brazil, in practice the implementation of indigenous rights is far from uniform or complete and is still hampered by major challenges (May et al., 2011b; Stocks, 2005). Another interpretation of these finding suggests that actors lobbying for existing patterns of deforestation and degradation are much stronger than any group challenging this status quo.

As noted above, in Vietnam, the state dominates both BAU and TC coalitions, which indicate a government commitment to implementing REDD + activities. However, there is a need for the state to go beyond the simplistic and rather propagandistic message that REDD + is a win–win policy, and engage with relevant political and institutional challenges to deliver effective policy outcomes.

The absolute dominance of a BAU coalition in Cameroon might reflect not only a lack of government engagement in REDD + policy development, but also a lack of capacity amongst the media to engage in what is often perceived as a very technical policy issue. The dominance of international actors indicates that, in practice, Cameroon is still in a very early stage of national policy engagement with REDD + and is not yet tackling policy questions of how to effectively formulate and deliver a REDD + policy strategy.

In PNG, the BAU coalition is only slightly more powerful than the TC coalition. In fact, the TC coalition is more vocal in the media (more TC opinion statements are expressed). Yet the BAU coalition presents twice as many stances by state actors, which indicates that the second condition for dominance also is not fulfilled for the TC coalition: authoritative state actors tend to use BAU discourses.

Thus, out of the six countries, only in Nepal does the TC coalition display a higher reputational power index than the BAU coalition (0.73, or nearly three times that of the BAU coalition). Although this difference is substantial, it is not sufficient to suggest that the TC coalition is in fact dominant. The fact that only one state actor is represented in this coalition indicates that the second condition for dominance is far from fulfilled. Although TC-related issues have reached a stage of discourse structuration in Nepal (and to a lesser extent in PNG), the lack of support from authoritative state actors indicates that, despite being vocal, discourse coalitions calling for increased attention to local REDD + benefits, community rights and local empowerment are not yet dominant.

5. Agents for change?

Powerful structural constraints and institutional path dependencies that facilitate deforestation and forest degradation (tax regimes, development policies, global market drivers, etc.) are present in all the countries investigated, and differ according to the main drivers, the position of countries in the forest transition curve and the stage of the REDD + policy process. Powerful interests in sectors outside forestry undermine cross-sectoral cooperation, and – as indicated in Table 1 – REDD + aims are often at odds with national development programmes. The strongest resistance to change occurs in countries that are characterized by high deforestation and forest degradation rates, and is rooted in sectors with large-scale operations, such as the plantation development investors in Indonesia and large landowners primarily involved in ranching in Brazil, which can direct substantial resources towards influencing the political system (Di Gregorio et al., 2012a; Indrarto et al., 2012; May et al., 2011b). Yet, notoriously, business interests tend to lobby behind the scenes which makes their influence 'never easy to see' (Weir 1996 as cited in Newell, 2000: 114). In some cases, resistance to change is institutionalised to the point that active lobbying is no longer necessary — these interests are already deeply entrenched in the state, which is reflected in political inaction and lack of policy debates on the key drivers of deforestation (Bachrach and Baratz, 1970; Bell, 1994). This could explain the relative absence of media statements from private businesses (those engaged in activities that drive deforestation and forest degradation) on REDD + in most countries and, in countries such as Cameroon, an absence of state engagement in these debates.

Consequently, BAU discourse coalitions reflect these major structural constraints through the absence of references to those large-scale drivers of deforestation and forest degradation. In fact, most media discourse that supports BAU does not directly defend policies supporting deforestation and forest degradation; rather, it largely ignores national issues, focusing instead on issues in international REDD + debates such as international funding. In other words, what becomes 'visible' in media discourse is the absence of direct challenges of deforestation drivers, providing evidence of 'politically enforced neglect' (Crenson, 1971: 184). In the same way, TC coalitions do not directly address the institutional path dependencies and policies that underlie these drivers. Instead, they address environmental justice issues and call for policy reforms that support more inclusive policy processes, more equitable REDD + benefit-sharing and the defence of local rights to forest resources. Domestic NGOs and CSOs are the main agents of change within these coalitions; even where these coalitions are more vocal than their BAU counterparts, as in Nepal and PNG, the current lack of support from state actors leaves them unable to achieve dominance in national policy agendas.

Nevertheless, the fact that in Nepal (and to a lesser extent in PNG) TC coalitions are able to dominate the discourse in the media in part reflects favourable structural conditions. Nepal has an institutional legacy of very strong local forest management institutions. Compared with other countries, community forest user groups in Nepal are extremely well organised within a long-established federated structure with effective representation at the national level (Paudel et al., 2013). In PNG, 99% of forests are owned by customary landowners (Babon and Gowae, 2013), which puts forest resources under local control. The strength of state-recognised local tenure rights means that policy debates cannot ignore local demands. These findings suggest that the strengths of local mobilisation and recognition of local rights to resources bring legitimacy to these coalitions and translate into their ability to utilise the national media to make their demands for the REDD + policy process heard. This is more evident in Nepal than in PNG, where the level of recognition of indigenous rights to resources in PNG is not matched by corresponding power of local organisations.

Even where these discourse coalitions are powerful, however, they are not necessarily dominant, nor are they guaranteed success, as two of the necessary conditions for dominance are not fulfilled: first, few state actors support these coalitions (none in the case of Nepal) and, second, the TC discourse has not yet been institutionalised. Consequently, TC coalitions remain forces that challenge deeply entrenched power structures yet have few powerful allies.

On the other hand, in Vietnam, state actors dominate both BAU and TC coalitions. However, this is more a reflection of the limited inclusiveness of the policy domain (domestic CSOs and NGOs have no voice in public debates on REDD +) of its authoritarian regime, than of its ability to effectively tackle drivers of deforestation and forest degradation.

It is worth noting here that embarking in transformational change – e.g. implementing policy reforms that counter existing policies supporting deforestation and forest degradation – entails a number of risks and challenges. For example, increased resistance on the part of powerful interests that support these drivers can lead to serious conflicts for government as well as directly harm their own interests (e.g. impact tax revenues, reduced electoral support). In the absence of the implementation of alternative sustainable development policies, it could also undermine development objectives especially in countries strongly dependent on forest exploitation and conversion of forests to other uses. The changes required in cross-sectoral coordination are also challenging and as all policy reform entails trial and error, unexpected consequences may lead to unfulfilled aims (Ostrom, 1999). Certainly transformational change is a long term process, which entails learning from past failure and balancing development, carbon emission reductions and livelihoods objectives through an appropriate policy mix, contextual to each country (Borner et al., 2011).

The analysis presented here provides an initial attempt at measuring the power of agency in national REDD+ governance systems. Methodological limitations arise because of differences between countries in terms of the size of policy networks and in response rates. Advances in measuring power based on network data will lead to improvements in assessments, and further integration of quantitative and qualitative analyses can help develop a more nuanced understanding of differences across countries. Another limitation of this study is that we compare only the two main discourse coalitions (1 BAU, 1 TC) in each country, whereas more detailed and nuanced differences would likely emerge in a more complete analysis. Despite these limitations, however, this comparative analysis of how REDD+ political processes are constituted by the governance structures, the actors engaged in the national policy domain, and the discursive mechanisms they employ revealed numerous constraints and opportunities affecting efforts to move towards more effective REDD+ policy formulation and implementation.

6. Conclusion

Actors, existing governance structures (e.g. institutional and policy path dependencies) and mechanisms (e.g. discursive practices) that enable or constrain REDD+ policy change – and the interplay between these three governance elements – shape the direction of REDD+ policy developments. Trajectories of change that lead away from business-as-usual scenarios are still under development in all the countries studied, even though the REDD+ debate has sparked the emergence of a new agency highlighting the environmental justice issues central to efforts to shift from business as usual to transformational change. Actors that support the existing forest governance structures and that benefit from institutional path dependencies are amongst the most powerful and employ discursive practices that do not challenge these path dependencies. Of concern for those seeking to realise a REDD+ mechanism is that the voice of coalitions challenging BAU remains muted, and the prevailing focus continues to be on international REDD+ debates rather than on domestic governance structures and related obstacles. Achieving REDD+ policy formulation and implementation therefore requires the formation of dominant coalitions that encompass policy actors from various sectors driving deforestation and forest degradation, with the recruitment of powerful state actors to engage more extensively with those discourse coalitions that are calling for transformational change. Without this, institutionalisation of discourse for transformational change is improbable, and cross-sectoral policy reforms tackling drivers of deforestation and forest degradation are unlikely to emerge.

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Appendix A

Country	Master frame	Actor groups in the main BAU and TC discourse coalitions (no. actor stances expressed in the coalition = frequency)	No. of coalition actors	Reputational power index $R_p = \frac{\sum_{i=1}^{n_p} id_i}{n_p(n-1)}$	No. of coalition group members × reputational power index	Reputational power index of discourse coalition R_d = sum of (no. of coalition group members × reputational power index)	Normalised reputational power index of discourse coalition $R_{\text{BAU norm}} R_{\text{TC norm}}$
Indonesia (56%)	Global financial support (BAU)	State (31)	66	0.16	4.82	8.74	0.676407
		Civil society (8)		0.10	0.81		
		International NGOs (7)		0.15	1.08		
		Foreign government agencies (6)		0.14	0.84		
		Intergovernmental org. and int. research institutes (5)		0.22	1.10		
		Nat. research inst. (1)		0.10	0.10		
		Others (8)		0.00	0.00		
	Risk of losing rights (TC)	State (3)	32	0.16	0.47	4.183	0.323593
		Nat. research inst. (1)		0.10	0.10		
		Civil society (14)		0.10	1.45		
		International NGOs (10)		0.16	1.59		
		Intergovernmental org. and int. research institutes (3)		0.21	0.62		
		Others (1)		0.00	0.00		

Appendix A (*continued*)

Country	Master frame	Actor groups in the main BAU and TC discourse coalitions (no. actor stances expressed in the coalition = frequency)	No. of coalition actors	Reputational power index $R_p = \frac{\sum_{i=1}^{n_p} id_i}{n_p(n-1)}$	No. of coalition group members × reputational power index	Reputational power index of discourse coalition R_d = sum of (no. of coalition group members × reputational power index)	Normalised reputational power index of discourse coalition $R_{BAU\ norm} R_{TC\ norm}$
Vietnam (100%)	Win–win (BAU)	State (5)	9	0.27	1.37	2.573411	0.653412
		Intergovernmental org. and int. research institutes (3)		0.32	0.95		
		Foreign government agencies (1)		0.26	0.26		
	User pays (TC)	State (5);	5	0.27	1.37	1.365008	0.346588
Brazil (87%)	Global solution (BAU)	State (7)	33	0.30	2.09	9.475234	0.638212
		Nat. research inst. (2)		0.24	0.49		
		Civil society (3)		0.35	1.04		
		Domestic business (1)		0.08	0.08		
		International NGOs (8)		0.29	2.33		
		Intergovernmental org. and int. research institutes (4)		0.21	0.84		
		Foreign government agencies (6)		0.44	2.62		
		Foreign/multinational business (2)		0.00	0.00		
	Participation of indigenous people (TC)	State (1)	16	0.30	0.30	5.371292	0.361788
		Civil society (13)		0.35	4.49		
		International NGOs (2)		0.29	0.58		
Cameroon (66%)	Global solution (BAU)	State(2)	6	0.47	0.93	2.561847	1.00
		Intergovernmental org. and int. research institutes (3)		0.48	1.43		
		Others (1)		0.20	0.20		
	None	n/a	n/a	n/a	n/a		n/a
Nepal (64%)	Global solution (BAU)	Nat. research inst. (1)	6	0.14	0.14	1.326146	0.273047
		Civil society (2)		0.45	0.90		
		Intergovernmental org. and int. research institutes (1)		0.28	0.28		
		Others (2)		0.00	0.00		
	Rewarding communities (TC)	State (1)	10	0.64	0.64	3.530692	0.726953
		Nat. research inst. (1)		0.14	0.14		
		Civil society (5)		0.45	2.26		
		Foreign government agencies (2)		0.24	0.49		
		Others (1)		0.00	0.00		
PNG (68%)	Global financial support (BAU)	State (14)	26	0.52	7.32	11.00411	0.51166
		Nat. research inst. (1)		0.42	0.42		
		Civil society (2)		0.27	0.54		
		Domestic business (1)		0.18	0.18		
		International NGOs (1)		0.30	0.30		
		Intergovernmental org. and int. research institutes (3)		0.33	0.98		
		Foreign/multinational business (1)		0.22	0.22		
		Foreign government agencies (3)		0.34	1.03		
	Empowerment (TC)	State (6)	30	0.52	3.14	10.5026	0.48834
		Nat. research inst. (7)		0.42	2.96		
		Civil society (9)		0.27	2.43		
		Domestic business (1)		0.18	0.18		
		International NGOs (6)		0.30	1.80		
		Others (1)		0.00	0.00		

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